

ARCHITECTURE

VOL. IX.

JUNE 15, 1904.

No. 54.

ARCHITECTURE, conducted by a Board of Architects in the interests of the profession, is published the fifteenth of every month by FORBES & COMPANY, LTD., 160 Fifth Avenue, New York. Its opinions on technical subjects are either prepared or revised by specialists.

PRICE, mailed flat to any address in the United States or Canada, \$4.00 per annum, in advance; to any foreign address, \$5.00 per annum in advance.

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ENTERED at the New York Post Office as second-class mail matter.

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REGISTRATION BUREAU FOR DRAUGHTSMEN.

This bureau is established for the use of architects wanting draughtsmen and draughtsmen wanting positions, free of expense to either party.

All draughtsmen wishing positions must register in person in this office and answer the following questions;

Name and address?

Age?

Married or single?

Experience?

Name and address of last employer?

Salary expected?

References?

All architects wishing draughtsmen are invited to use this bureau.

THE HOTEL ST. REGIS, NEW YORK.

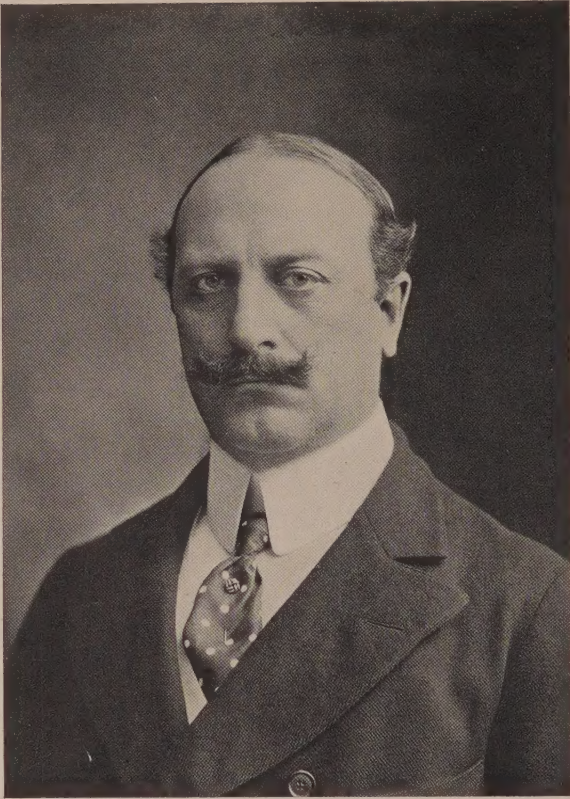
THE development of the skyscraper was first due to the necessities of business buildings. It was inevitable, however, that a method of construction which gave such good financial results in one class of buildings, should soon be applied to another, and it was but following the natural course of events, that Col. John Jacob Astor decided to undertake the erection of a hotel eighteen stories in height. Although other hotels have been built on this system, the St. Regis, Fifth Ave. and Fifty-fifth St., was the first to be erected on so small an area, of such a height and with so many appliances for comfort and convenience. Messrs. Trowbridge & Livingston are the architects.

While a business building must be supplied with elevators, heat, light and toilet facilities, a hotel of the first class must have, in addition to these, ice making machinery, coal storage, wine storage, pneumatic tube service, telephone and bell service, a plumbing system designed to supply many bath rooms, a kitchen and a laundry. In fact, a hotel, like a great ocean steamer, must be able to supply from its own premises and at a moment's notice every demand of modern life. But, unlike the ocean steamer which can be laid up when it is out of date and another substituted, a hotel must be so arranged as to be capable of improvement to meet new necessities and new demands. All this apparatus and machinery occupies so large a space that in the case of the St. Regis it was found necessary to make three stories below ground. Another structural difficulty is occasioned by the requirement of rooms on the lower floors of large and monumental proportions, bridged over heavy girders and complicated trusses to carry the walls above.

Many of the mechanical problems presented in the designing of a skyscraper, are due to entirely new conditions. If there are twenty stories of rooms, there must be proportionate repetition of all the appliances for light, heat, water, drainage, and service generally, and many devices must be evolved lest this complication of pipes, flues, ducts and wires, occupy so much of the wall and partition space as to defeat the prime object of the structure, that is, the gaining of floor space. Perhaps the best illustration of this is the heating of the Hotel St. Regis.

When the hotel was projected, a scheme was devised by which the system of indirect radiation combined with forced ventilation, which has been in vogue for many years for buildings of three or four stories only, could be applied without the loss of floor space, heretofore considered a necessary accompaniment. This was accomplished in the following manner: The fresh air, instead of being taken in at the basement and conducted to all floors, as in private houses, enters the building at the third, seventh and twelfth floors and at such points where space is of the least value. At these points there are chambers, where the fresh air is filtered, warmed by passing over steam coils, moistened, and then forced by blowers, operated by electric motors, through ducts to the various rooms, each blower room supplying fresh air to four or five stories. The foul air is exhausted through the chimney flues of each room, which are in turn collected at the top of the building where a vacuum is produced by large exhaust fans, and the foul air and smoke are finally discharged. The duct system is very simple. As it is not necessary that the ceilings of the corridors should be as high as those of the rooms, the difference has been utilized. This space is occupied by the main ventilating ducts, from which branch ducts, all mathematically proportioned, are taken out to supply the rooms.

To regulate the supply of heat, every room, bathroom and corridor is supplied with an automatic Thermostat, which is set at



Architects of To-Day.

MR. S. B. P. TROWBRIDGE.

the required temperature and which operates by electric contrivance, the necessary dampers and valves.

One of the most interesting and valuable improvements, both commercially and hygienic, is the installation of the Kenney Vacuum Sweeping System. The building is piped especially with smooth-bore pipes for this system, having ten outlet connections on every floor, which are connected with a series of separators and air-drawing machines. To operate it, the servant or operator, instead of sweeping the floor with a broom, attaches a hose connection to the outlet, and by passing the sweeper or renovator over the floor, an absolute removal of dust takes place, which, with the finer particles, and possible disease germs that would otherwise float in and fill the air, are drawn by vacuum, through the sweeper and pipes, down into air-tight separators in the basement, where it is collected and removed; dispensing with dusting, and creating not only a commercial saving in time and in the life of the furnishings, but a sanitary condition of incalculable value to health; besides keeping the hotel at all times in a healthier, cleaner condition than would be possible under the old method.

A distinctive feature of the St. Regis is the use of marble and bronze. All the corridors are paneled with the finest marble from the floor to the ceiling. The room doors are of white or red mahogany or of Circassian walnut.

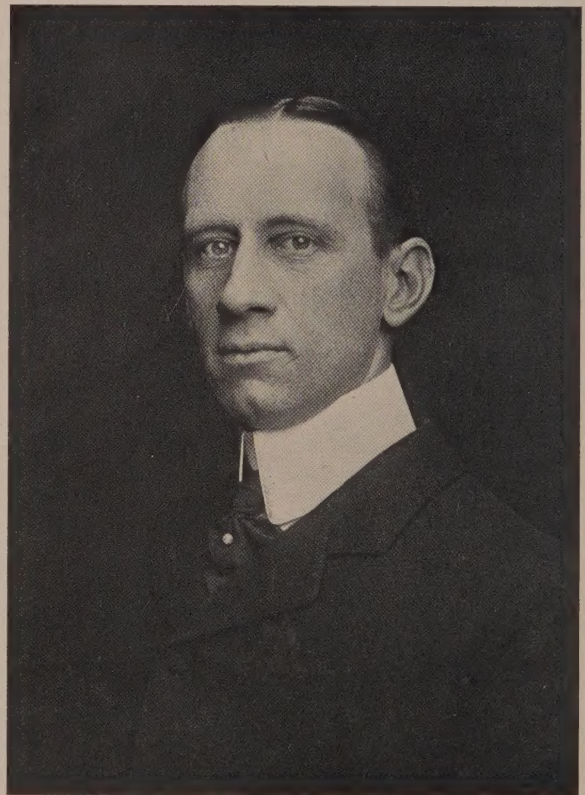
From the point of view of design, the high building presents to the architect, even greater difficulties. Messrs. Trowbridge & Livingston have worked out the problem so cleverly that it is worthy of some consideration as to the causes and effects. Since economy of space is the most important factor in the plan there can be no recesses in the facade of more than a few inches. The outer

walls must stand on the lines which mark the limits of the property. In New York City no projection to form a base is allowed by law.

Any treatment of the exterior walls which calls for the use of the orders, an arrangement of columns and entablatures, is not only illogical from the standpoint of economy, since it violates the first condition by cutting down the floor space, but is also aesthetically an error since it is in no wise an expression of the real construction. In a hotel the windows must be proportioned to the rooms. Moreover, the lower stories where the large monumental rooms are situated, must have large openings. The condition of the openings was accepted frankly, all windows were made of the size and number necessary to properly light the various rooms.

It has been the custom in high buildings to carry up the walls to the very top, crowning the edifice in the manner of low buildings by a heavy cornice with a parapet and flat roof. This method of terminating the composition is not very successful. The sky line is harsh and the shape of the building is ungraceful. A cornice of iron in imitation of stone is an expedient unworthy of consideration, while if the cornice is constructed of stone, it is impossible to give it a projection proportionate to the height of the building. In this case, a roof was decided to be the proper termination. Although the proportion of roof to the height of the wall is a shock at first to minds accustomed to lower buildings, it is believed that habit and reason will soon adjust our feelings in this regard. To mark the crowning of the edifice, in place of a cornice, a strong horizontal line was obtained by the introduction of a balcony at the fifteenth floor.

The effect of a base or a superstructure was obtained by adding another balcony at the third floor level and by heavy rusticated masonry from the ground up to this level.



Architects of To-Day.

MR. GOODHUE LIVINGSTON.

To limit and define the design, the corners were decorated with double chains of flat rustication, accented at the base by vertical wreaths of flowers and fruits.

Since it was necessary to depart so radically from the accepted forms of design, it was deemed admissible to use a great deal of freedom in designing the ornament. Natural forms were copied with more or less accuracy and new profiles for the mouldings, new outlines for balusters, consols, keystones and other ornaments were designed, great care being exercised lest freedom should degenerate into license and the result should be bizarre.

A study of the site and surroundings developed the fact that this building could be seen only from considerable distance, or from points immediately at the base in the narrow streets on which it faces. It was important that the outline or silhouette of the mass when seen from a distance should be graceful and pleasing, and that the ornament should be concentrated at a few strong points; that the projections should not be so great as to shut off from view the upper parts of the building when looked at from below. The same point of view required not only that the scale of the ornament should receive most careful attention, but also that the soffits of all projecting parts and the plans of balconies should be studied to form part of the composition.

In high buildings so many new conditions are brought into existence, so many problems presented for solution that the architects are constantly inspired to new endeavors that lead naturally into the field of legitimate originality.

We think it fitting to call the attention of the profession to the following firms, whose co-operation with the architects has brought forth an ideal hotel in design and equipment:

Marc Eidlitz & Son, general contractors; American Encaustic Tiling Co., tiles; Batterson & Eisele, interior marble work; Cutler Mfg. Co., mail chute and box; Jos. Dixon Crucible Co., graphite paint; The Ellis Company, automatic sewer lifts; The Fairbanks Company, valves; Hecla Iron Works, architectural bronze and iron work; Herter Brothers, interior finish; Wm. H. Jackson Company, mantels, interior bronze and tile work; Jewett Refrigerator Company, refrigerators; Johnson Temperature Regulator Company, thermostatic regulation; D. T. Kenney, sweeping system; Kinnear Manufacturing Company, rolling steel shutters; J. L. Mott Iron Works Company, plumbing fixtures; New York Belting and Packing Company, Ltd., rubber tiling; Otis Elevator Company, elevators; Pfotenhauer & Nesbit, enameled brick; Pneumatic Elevator Safety Company, safety elevator device; Roebbling Construction Company, fireproofing; W. & J. Sloane, interior finish; Van Kannel Revolving Door Company, revolving doors; Vulcanite Portland Cement Company, cement; Watkins Laundry Machinery Company, laundry machines; Yale & Towne Manufacturing Company, hardware.

PROFESSIONAL COMMENT.

IT is a wise man who knows when he is a member of the A. I. A. and the following story is typical of the ignorance of the true situation on the part of a large number of Chapter members:

Some years ago a certain New York Architect found his health failing, and in consequence, he emigrated to the Adirondacks. Upon regaining his health, he determined to renew his practice in his new field, and being a member of the New York Chapter of the A. I. A., he bethought himself that it might be wise to announce he fact upon his business stationery, in order that he might be dis-

tinguished from the local "Archeetects" who were his competitors in his new field. He came to New York recently, and desirous of being informed of some action taken by his professional brethren in in his old home, he visited one of the officers of the local Chapter and presented his card bearing the legend in small type "Member of the Institute of Architects." Imagine his surprise when he was informed that this card did not contain a proper statement of the facts, and that he was not a member of the Institute.

This innocent victim had been a member of the Chapter for five or six years and naturally presumed from the name of the organization upon whose roles his name was inscribed, that he was a member of the Institute as well. He returned to his Adirondack home a wiser, and in his own mind, a less distinguished Architect.

The A. I. A., was undoubtedly patterned after the manner of the Royal Institute of British Architects, and the charter members endeavored to carry out the English programme intact by adopting the class distinctions so dear to the British heart, and creating grades of membership, instead of adopting American methods and making all members equal in their standing in the organization.

The present situation is the result of this programme and there is a feeling among a large number of Architects that the small number of men now in control of the National body are purposely keeping the membership as small as possible, in order that they may reap the benefits of the "Tarnsey Act," and unless something is done within the near future to remedy this state of affairs, a revolt of Chapter members is likely to take place similar to that which has recently occurred in the National Sculptor's Society, where a large number of disgruntled members have seceded from the parent body and formed a new organization, on account of what they designate as the "trust" methods of the parent society, which has been for some years entirely controlled by comparatively few men. These protestants claim that this small coterie holding the controlling interest in the National Sculptors's Society have the disposition of nearly all great commissions and that the work is distributed among their pupils and underlings who repay the kindness by attending the meetings of the society and furnishing a majority vote on the side of their patrons, and that by so doing these leaders conduct what is virtually a "monopoly and political machine rolled into one."

IT will be an unfortunate event for the Architectural profession if Uncle Joe Cannon should accept the nomination for Vice-President on the Republican ticket, and if he should be elected to that office the weight of his influence would be felt in a more positive manner than it is at present.

There is already a disposition on the part of a member of Congress to repeal the "Tarnsey Act" on account of the use to which they charge it is being put by the small number of men controlling the National body of the Institute of Architects. That this would be a misfortune for the profession is unquestionably the fact, notwithstanding the present mode in the application of this excellent statute.

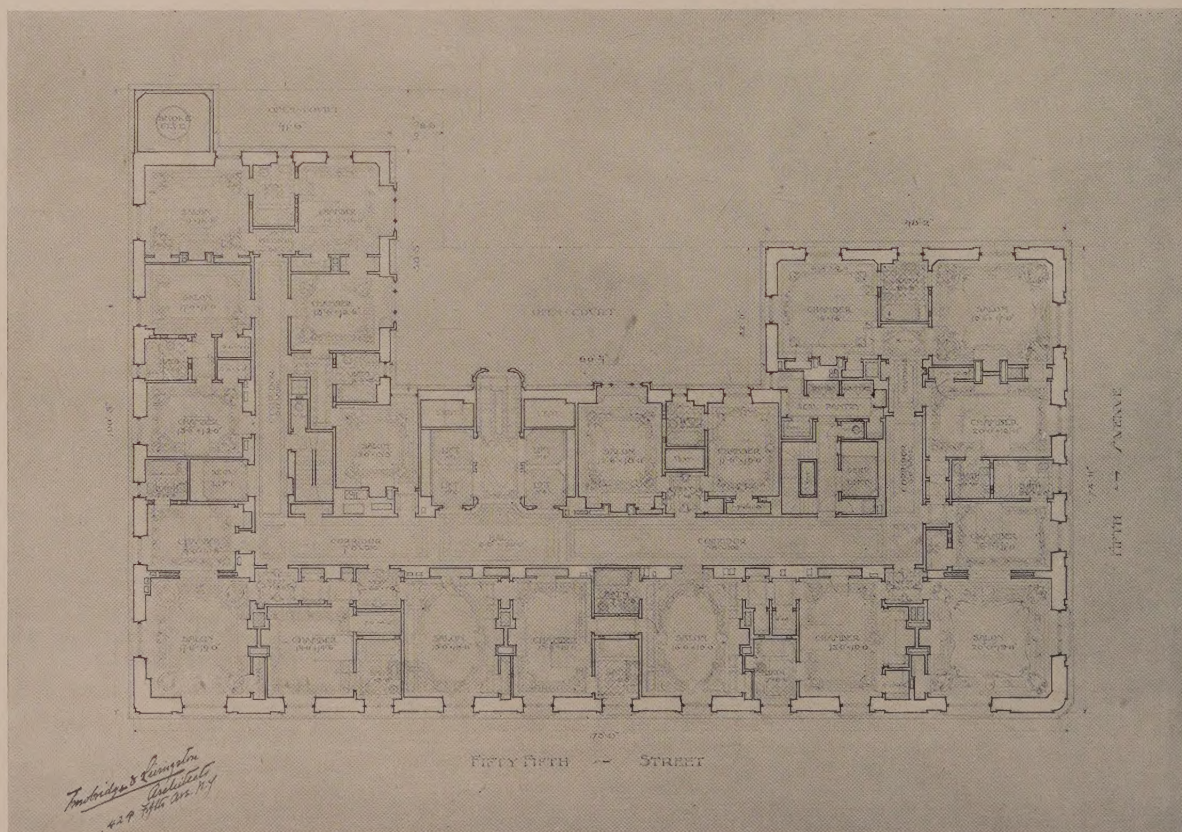
Uncle Joe is typical of the American rural class, and has little use for a man who makes pretensions to considering building a profession. We have already met men of this class who prefer to employ "practical builders," and who can see no use of the Architect. He has already shown his contempt for art by being instru-

(Continued page 85.)



TEA ROOM, LOOKING WEST, HOTEL ST. REGIS, NEW YORK.

Trowbridge & Livingston, Architects. Wurts Bros. Photo.



TYPICAL FLOOR PLAN, HOTEL ST. REGIS, NEW YORK.

Trowbridge & Livingston, Architects.

(Continued from page 83.)

mental in refusing incorporation to the American Academy at Rome, and stating as his reasons, that "if any young feller wants to go to live in Europe, he can pay his own way."

Uncle Joe believes in patronage and wants the opportunity to distribute that patronage, where it will do the most good, and according to Mr. Glenn Brown's very interesting history of the Capitol, he has already imposed his views upon this administration by convincing the President that Congress should have the appointment of the Architect of the Capitol. After having arranged this matter to suit himself, Uncle Joe promptly appointed a clerk to the job whom he wished to take care of. It is true that the clerk made no pretensions to being an Architect, but this matter was quickly arranged by changing the title of the office, from that of Architect of the Capitol, to Superintendent of Public Buildings and Grounds.

THE Japanese are evidently as thorough in their architectural work as they are upon the field of battle. We were recently shown a plan made by a Japanese Architect for a small house which was a marvel of completeness and which combined plan, specifications and details all in one within the side of a folder which could be put in one's pocket. It consisted of a flat sheet of paper about 1 ft. x 2 ft., upon which the plan of the underside of the roof was drawn. On this piece of paper in their proper positions, other sheets were pasted by their edges which when raised vertically from the plan formed a complete model of the house turned upside down. and on both sides of each wall and each partition all openings were drawn and figured, details of the finish noted and specifications written. When placed down flat the original sheet containing the roof plan was carefully folded over and the whole thing could be easily put in a space about 10 x 12 inches.

SOME years ago when cement construction was first introduced in this country, ARCHITECTURE predicted a great future for it, and present conditions seem to bear out this prediction. Already New York possesses two structures where the exteriors have been entirely finished in cement over common brick. In both cases the properties have been leaseholds where the comparative economy of the system appealed to the lessee. Cincinnati has taken the lead in first furnishing us with example of the concrete-steel sky scraper, Mr A. D. Elzner, being the Architect.

ARCHITECTS have been charged with a great many crimes in the past, but a recent writer in the New York Sun adds to the list by holding them in a measure responsible for the "race suicide," said to be so prevalent amongst the population of our large cities. The profession has evolved the apartment house to meet the economic demands of the times, and the writer makes this logical deduction therefrom, "the connection between the apartment house life and small families is obvious. Apartment houses are never less than six stories high. They are generally huge structures, having suites for 28 to 56 or more families. Their elevator service is necessarily planned with reference to small families. If each apartment were to contain several children, additional elevators and attendance would have to be provided, increased cost for electric current would be incurred, and valuable rental space would be diminished. Operating expense would eat up the income. The cost of land is so high in most of our centers of population, that most families must live in apartments. Architects have catered to this tendency and are logically in a measure responsible. Q. E. D."

Even if architects are responsible for this state of affairs, they are undoubtedly promoting cleanliness also, as can be seen by a huge sign now exposed on a large building in course of construction in a prominent locality on Fifth Avenue, where stores, lofts and offices are offered for rental "with or without private baths." Another peculiar development of the office building is a large structure recently altered into suites of rooms prepared exclusively for the occupancy of physicians.

THE valuable elevator statistics quoted in last month's issue were tabulated by Mr. Charles H. Kloman, of the Otis Elevator Company, and we regret that by an inadvertence this gentleman was not given due credit.

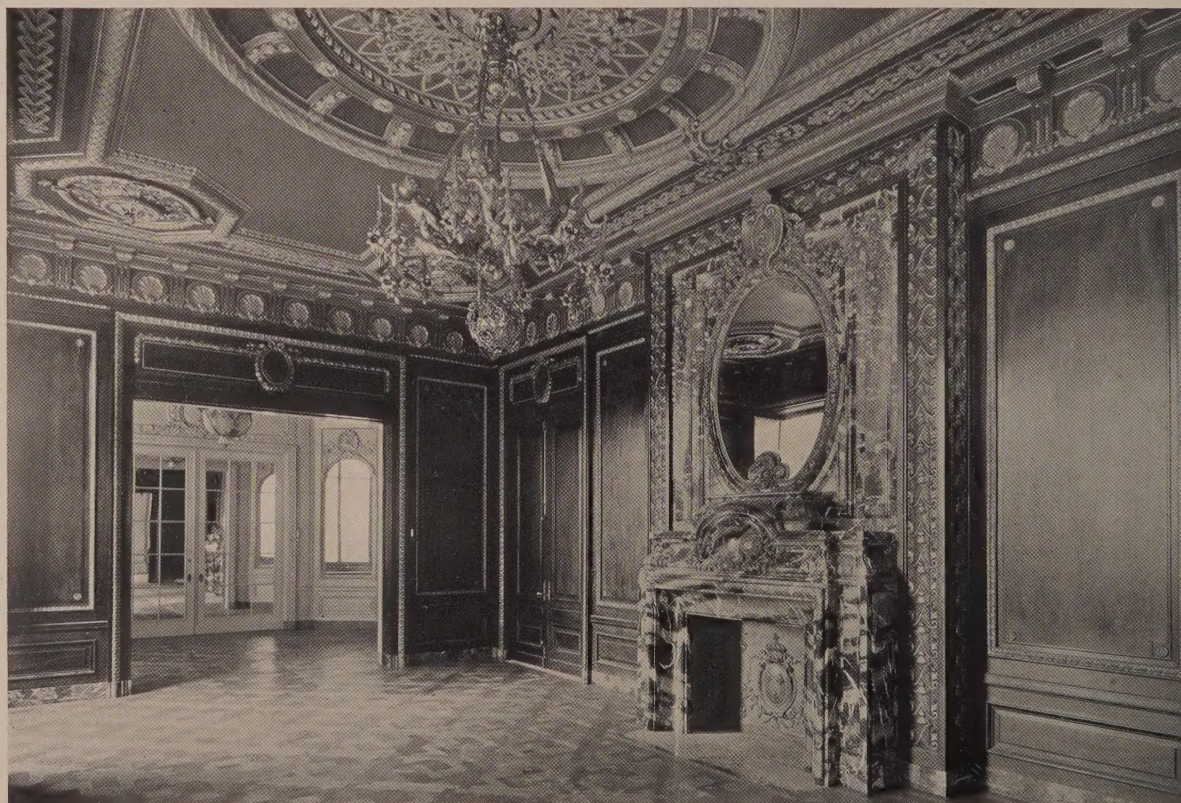
AGAIN, the licensing bill passed by the recent legislature of the State of New York has been allowed to die by Governor Odell. But we trust that the men behind the measure will not be disheartened, and remember that New York State will have a new Governor in 1905. Notwithstanding the Governor's action, it is evident that the municipal authorities consider that more safeguards must be placed around building operations, and the Board of Aldermen of the City of New York has unanimously passed an ordinance, which now awaits the Mayor's signature, giving the superintendent of buildings police powers in emergencies, although in the opinion of a large number of lawyers, he already had sufficient power under the Code to meet any ordinary state of affairs which might arise within his jurisdiction. There is no doubt that this power may be used to the great advantage of the public, if it is not abused. But most New Yorkers remember to their cost, how these dictatorial powers have been abused by the Bureau of Buildings under past administrations.

GOOD relations between the architect and the contractor are absolutely necessary to the proper conduct of any building operation, and as if the architects did not have sufficient trouble already in conducting the business of their offices, the Employers' Association of New York City have recently passed a rule demanding that payment upon contracts be made monthly on the basis of 80 per cent. of the work performed. We trust that the architects will vigorously oppose the introduction of this system, as it is bound to lead to controversies and bad feelings between the architect and the contractor, a situation which we all wish to avoid. With the best of intentions on the part of the two opposing interests, they will never agree as to the value of the 80 per cent., and payments at specified intervals of the work, as has previously been the case, will preserve the good understanding, which cannot be reached under the new method.

WE are somewhat surprised to find that a number of journals devoted to the contractor's interest in the building trade, are opposed to the system of building by which the contractor is paid the cost plus 10 per cent. Heretofore, we had supposed that the contractor considered this the ideal conditions, but we now find that a number of men to whom such fortunate contracts do not come, consider that the system has a reflex action upon wages. They claim that the contractor not being particularly interested as to the cost of the building which he is erecting, is enabled to get labor, when labor is scarce, by offering higher wages than other men can afford to pay who are building for specified sums, and that by so doing he raises the standard of wages above the normal level, and consequently puts the less fortunate contractor at a disadvantage.



DINING ROOM, STATE APARTMENT, HOTEL ST. REGIS, NEW YORK.
Trowbridge & Livingston, Architects. Herter Bros., Interior Decorators. Wurts Bros. Photo.



RECEPTION ROOM ADJOINING BANQUET ROOM, HOTEL ST. REGIS, NEW YORK.
Trowbridge & Livingston, Architects. Herter Bros., Interior Decorators. Wurts Bros. Photo.

THE value of an art censor in a great city can be fully realized by the report of the Municipal Art Commission of the City of New York for the year 1903. This commission considered during this year in all 117 cases, which were submitted to them for approval, and 61 designs were restudied to conform to their suggestions.

WE have before us a report of the Committee on Decorations of Public Schools of the Municipal Art Society of New York containing a number of practical suggestions which if carried to their logical conclusions so as to embrace the schools of the country generally, should go a long way toward improving the taste of the future generations of Americans, and in so doing make for better architecture throughout the nation.

The committee states that it wishes to "initiate a movement for the improvement of our public schools along artistic lines. Not for the promotion of art for art sake, nor for opening new avenues for artistic endeavor, but for the common sense practical and laudable purpose of introducing object lessons through the influence of which aesthetic taste and desires for more agreeable surroundings and civic pride might be developed among the people, and by illustrating all subjects taught in the public schools to assist in fixing in the minds of children certain facts in their daily lessons which no text book can clearly define, and which without illustration mislead and produce nebulous impressions and defeat the object of construction in these branches. For example: In History, Geography, Architecture, kindred subjects, and lastly for the value of art in education of the sentiments and emotions which are of such importance in character forming."

The programme of what this committee wishes to accomplish at the present is modest in the extreme, and it has selected one high school in New York and has prepared a definite programme for the decoration of this building with "a series of paintings in the corridors of the main buildings illustrating, for example, the various studies in the curriculum bearing directly on the many subjects taught as object lessons necessary for the complete understanding of the text books." For instance, the committee proposes that "on the walls of the corridors of the first floor for the promotion of the character, taste and ideals along architectural lines, master pieces of architecture might be conspicuously placed, set in the midst of their original surroundings, beautiful as decorations and invaluable as instructors in this noble art. For example: Egyptian monuments, temples and sculpture. The Parthenon and the great buildings of Greece. The Pantheon of Rome with the Coliseum, Aqueducts, and St. Peters, that greatest of all temples, fine examples of Renaissance and Gothic, and so down to the present time."

A population brought up under these surroundings and influences will undoubtedly do more toward raising the standard of American Architecture than many times the effort placed where it reaches the small portion of the population who intend in time to equip themselves for a life work in the field of art. If the taste of the coming generation is raised in this manner, the art and architecture of the whole country is bound to respond.

THE MODERN PRACTITIONER.

H. S. STOKES.

IN his double capacity of designing buildings and carrying them into execution, the architectural practitioner is often misunderstood. There are those who blame him for inattention to business

matters, for ignorance of law, for excessive cost of building; there are others who make him equally responsible for any defect in the building, structural or artistic. He has to serve two masters—his client, who expects a good deal from him in matters of business, and his own artistic conscience, or that more enlightened and appreciative public who are always ready to criticise. This dual capacity has not been taken into full account by those who are inclined to sum up the architect's qualifications according to an academical standard or to some mode of practice that once existed.

Practitioners may be divided broadly into those who are men of business and those who are men of art. The former must be a man of action. He must not only think, but he must act. In receiving instructions to design and erect a building he ought to be able to put his ideas into a practical form, to draw out the wishes of his client, to enter into his requirements and tastes, be ready to meet any emergencies, and to anticipate objections, and the better prepared he is for this task the greater will be his success. Unfortunately, many of those who enter the profession have not this double gift. They give an opinion that is not supported by fact, or that may do in one set of circumstances but is quite inadequate in the particular case. This may not only apply to the design of a building, but also to the conduct of the work, in the supervision. In matters of superintendence a lack of caution or foresight often renders the architect or his client liable for some neglect. Probably it is only experience that will enable an architect to act. He has learned to anticipate these difficulties and contingencies, and to prepare for them. Examination alone will not give him this intuition—no doubt a strong reason why the old system of pupilage is so valuable. Practical acquaintance with building operations is the only way in which the young architect can learn these matters. How many of the younger men in the profession in the first contracts they have to carry out discover one after the other these hindrances and opposition—matters about which they had not the faintest conception, such as the obstacles in getting their plans passed, local regulations which require a considerable alteration of the plans, opposition of adjoining owners, the demands of litigious contractors for orders for extras, etc. He finds that his theories and assumed knowledge of his profession all leave him; they are of no use to him in these difficulties which crop up during the progress of the work. Circumstances arise which render his drawings or details useless; his specification requirements are disputed or called into question by the contractor, or his contract, on which he prided himself as being impregnable, is found out to be open to attack. What he has learned in books and classes about stone and timber or construction he finds of very little help when he is confronted with actual facts, materials and building operatives, who look at them in a different way. There is nothing in common between the book theory, or terms used in the school, and those which the builder or tradesman uses. In short, he finds it necessary in the course of time to learn his business over again, and to adopt the practical phraseology of the workshop. On the whole, it must be confessed that the practical part of the architect's vocation—the business and active portion—is becoming more complex and intricate every day, and while a great deal can be learned in the architectural schools a great deal more will depend on the student himself, his natural aptitude and energy. The right direction of study is one of the main things that the schools ought to teach. A great many in the profession go about their work in the wrong way. Instead of taking a little trouble to understand their client's requirements, his trade or his habits, they distract his attention with designs of build-

(Continued page 93)



MAIN ENTRANCE FROM LOBBY, HOTEL ST. REGIS, NEW YORK.

Trowbridge & Livingston, Architects. Wurts Bros. Photo.

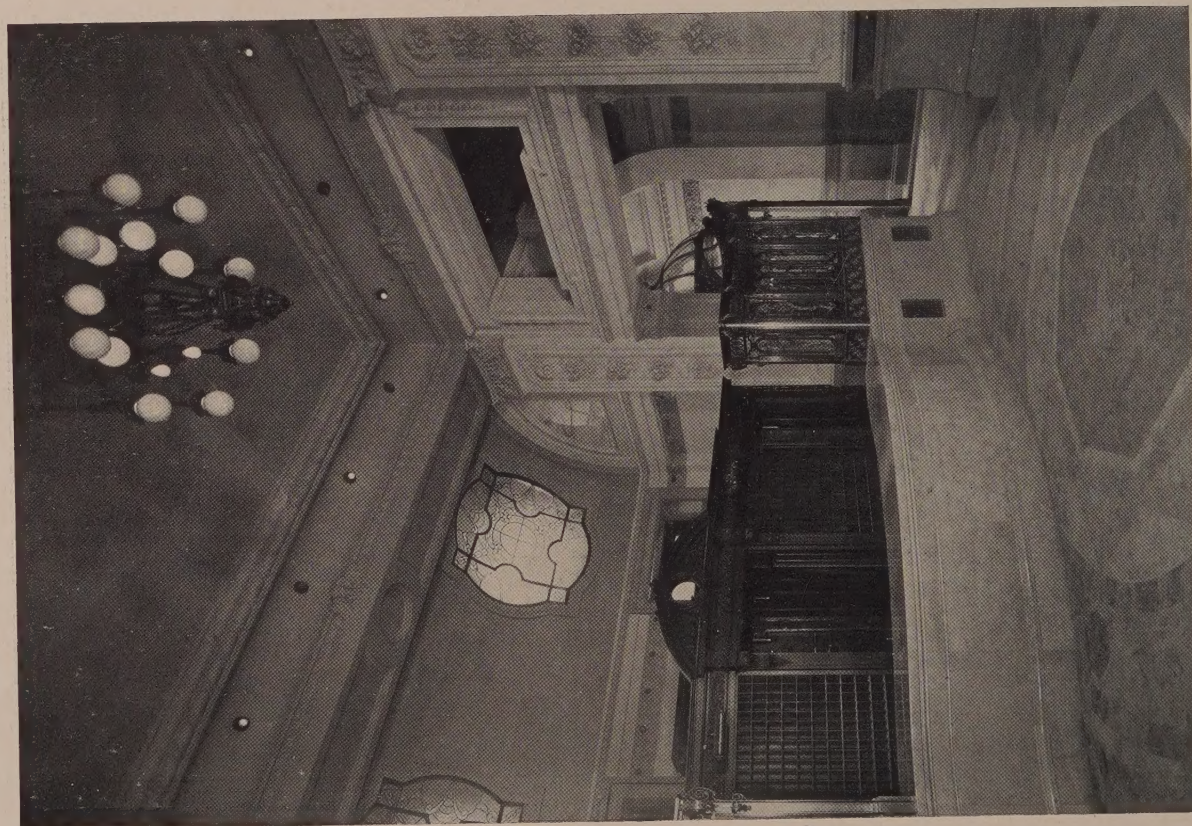


MAIN ENTRANCE, HOTEL ST. REGIS, NEW YORK.

Trowbridge & Livingston, Architects. Wurts Bros. Photo.



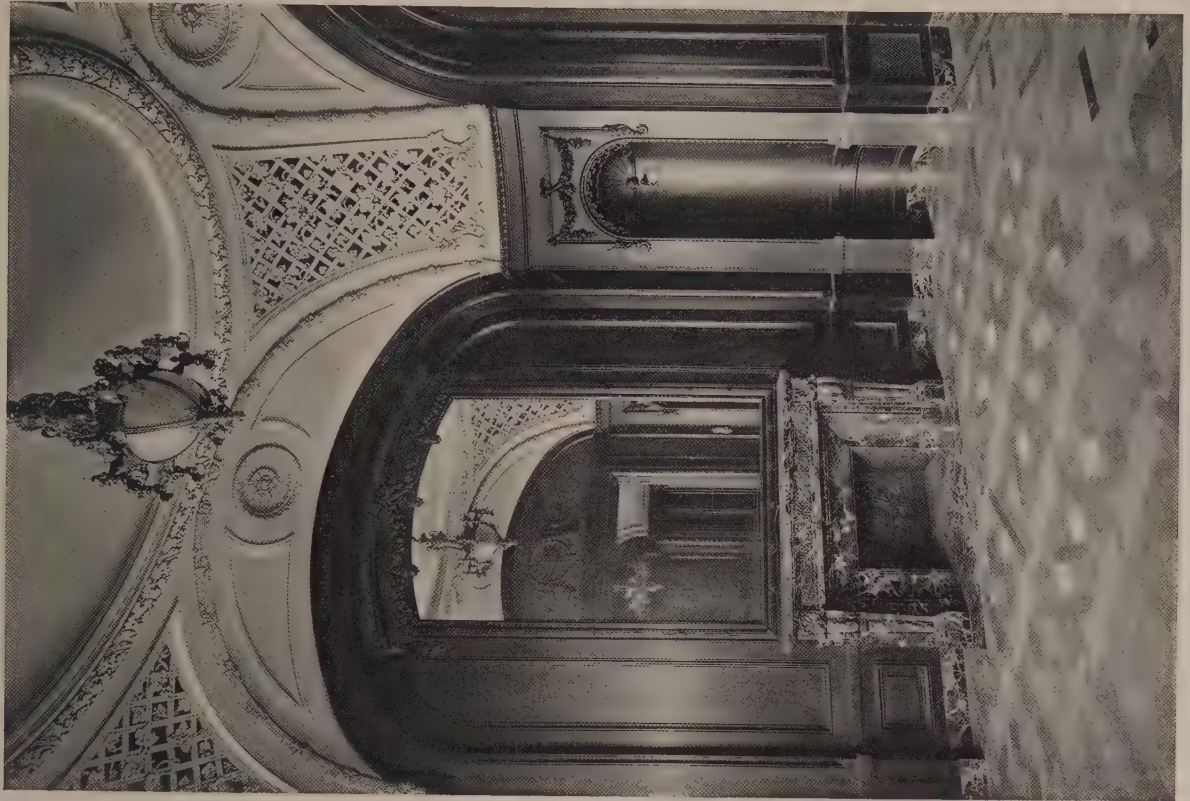
LADIES' DINING ROOM, HOTEL ST. REGIS, NEW YORK.
Trowbridge & Livingston, Architects. Wurts Bros. Photo.



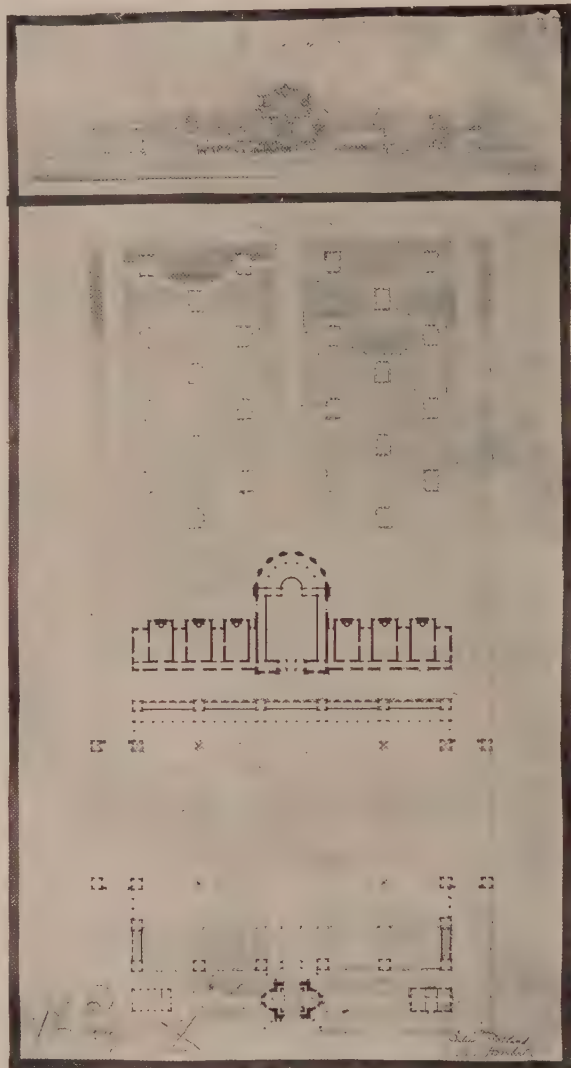
LOBBY, SHOWING DESK, HOTEL ST. REGIS, NEW YORK.
Trowbridge & Livingston, Architects. Herter Bros., Interior Decorators. Wurts Bros. Photo.



LIBRARY, HOTEL ST. REGIS, NEW YORK.
Trowbridge & Livingston, Architects. Herter Bros., Interior Decorators. Wurts Bros. Photo.

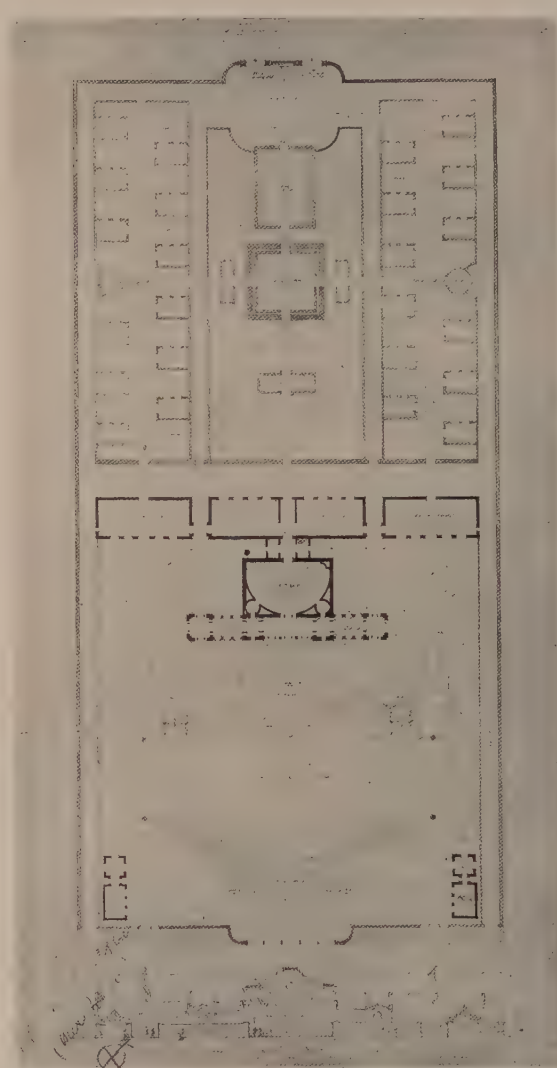


CORNER IN WRITING ROOM, HOTEL ST. REGIS, NEW YORK.
Trowbridge & Livingston, Architects. Herter Bros., Interior Decorators. Wurts Bros. Photo.



FIRST PRIZE.

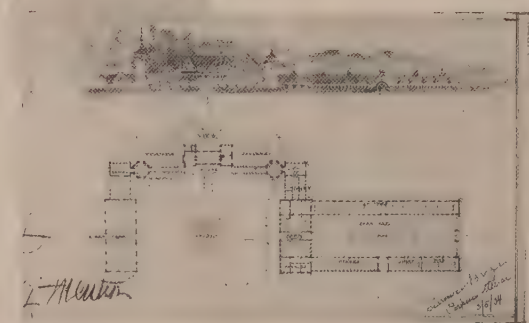
J. Holland, Atelier Hornbostel.



HORS CONCOURS.

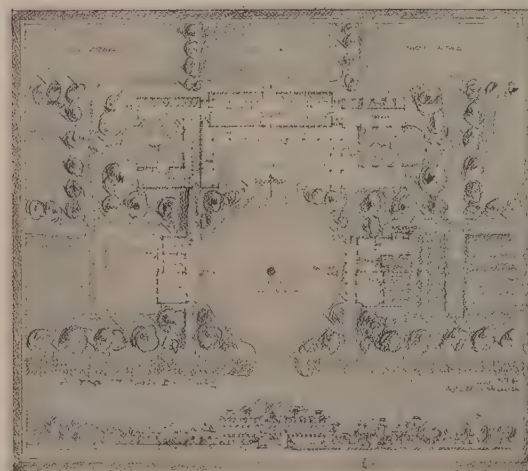
J. Wyncoop, Atelier Donn Barber.

BEAUX ARTS COMPETITION. WARREN PRIZE.



II. MENTION.

C. W. Brazer, Atelier Perkins.



II. MENTION.

E. H. Lebeis, Atelier Donn Barber.

BEAUX ARTS COMPETITION. CLASS B, ESQUISSE-ESQUISSE.

(Continued from page 87.)

ings they have executed, with suggestive schemes which have little reference to the actual wants. The client, if he does not know, selects a design which turns out a failure, or if he does know what he wants, feels disgusted, and abandons the whole. In other cases the practitioner plays into the hands of builders or other tradesmen who have an interest in the work, and compromises himself. Some consult their own pockets by increasing the expenses, adding to the ornament of the building, proposing designs for subsidiary things, like decoration, fittings or ironwork of a costly kind, which increase the cost unnecessarily. In questions of law, contracts, dealings with builders and committees, the necessity of dealing and acting rightly and promptly can only be acquired by knowledge of the point at issue. In matters of design the client may insist on a course which the architect knows is prejudicial; it is the duty of the professional man to advise, not to give in too complacently to the client's wishes. To yield in matters of plan may lead to serious mistakes and recriminations afterwards. In questions of design the architect may easily forsake his duty under the idea of pleasing his client and bring reproach upon himself. Sometimes, as in the case of a shop, the business requirements of his employer may demand a large plate-glass window quite out of keeping with the upper part of the elevation, and the architect finds it hard to reconcile his artistic conscience with the suggestion. Yet he should not waver in his opinion, and he is justified in doing all he can to dissuade his client from a course that will not redound to his credit as an architect.

The other side of our question, the practitioner as a man of art, involves the question how far it is practicable to combine the business with the art side of the profession. We do not discuss that point now. There have been several notable instances of architects rising to a considerable position in the profession, who have been good men of business. To affirm that the two things are incompatible is simply to assert that a majority of the best architects are not qualified by nature to make good business men. Their training and their habits of thought are so unlike. Much may be done by the method of training and instruction the young man receives while serving his terms of articleship; but a great deal more is the result of the pupil's own aptitude and natural capacity in this direction. One pupil will direct his attention to transactions between the master and the builder. He will take an interest in the letters which pass between the architect and client or contractor, the issue of certificates, reports and valuations which it may be his duty to copy, while another student in the same office may be quite oblivious to these transactions in his eagerness to make drawings. The first of these will make a good business man; he is all-observant of what passes, and is ready to discuss any matter of business, while the latter turns a deaf ear to all that concerns external routine in his love for artistic work.

BOOK REVIEWS.

ARCHITECTURAL REFINEMENTS in French Gothic Cathedrals and Early Byzantine Churches. April, 1904, Brooklyn Institute of Arts and Sciences. William Henry Goodyear.

During the first and second quarters of the Nineteenth Century it was observed that the temples of the ancient Greeks exhibited a variety of intentionally constructed deviations from the exact symmetry and geometrical regularity which had been presumed by the earlier students and imitators of these monuments to be present in them. Straight lines, true perpendiculars, equidistant spacings, and uniformity of dimensions in corresponding parts, were found to have been generally avoided in Greek architecture. In 1874

the author of this Memoir published observations and measurements of constructed bends, leans, obliquities, and curves in the lines and surfaces of the Pisa Cathedral and announced the probability of a relationship of purpose, and of a historical connection as regards derivation, between these phenomena and those which had been found in the Greek temples. In the summer of 1903, his research was extended to Northern France and to the Byzantine churches at Constantinople. Twenty-seven towns were visited, and twenty-nine churches and cathedrals were found to exhibit the vertical curves or the widening refinement, with or without vertical bends. It may, therefore, be confidently concluded that a very large proportion of the mediæval cathedrals and churches in Northern Europe will be found to exhibit similar refinements.

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Treasurer.

The monthly meeting and dinner, the last of the season, was held at Dreamland, Coney Island, on the evening of June 7. The management extended the courtesies of the fifty-four attractions to all the League members. * * * *

The Society of Beaux Arts Architects

INCORPORATED 1894.

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3 E. 33d St.

Chairman Committee on
Education.

CLASS B—ESQUISSE-ESQUISSE.

A GROUP OF FARM BUILDINGS.

These shall consist of: A large barn for storage of hay, corn, etc., with stabling for forty head of cattle, twenty farm horses, sheds for carts of all sorts, pens for sheep, stys for pigs, a kennel, a chicken-house, a dairy, the farmer's cottage, a dove-cote, a kitchen-garden. The space occupied by these buildings is unlimited. The drawings shall consist of a plan and elevation at $\frac{1}{32}$ " scale, and may be rendered in any manner desired.

LLOYD WARREN,
Chairman Committee on Education.

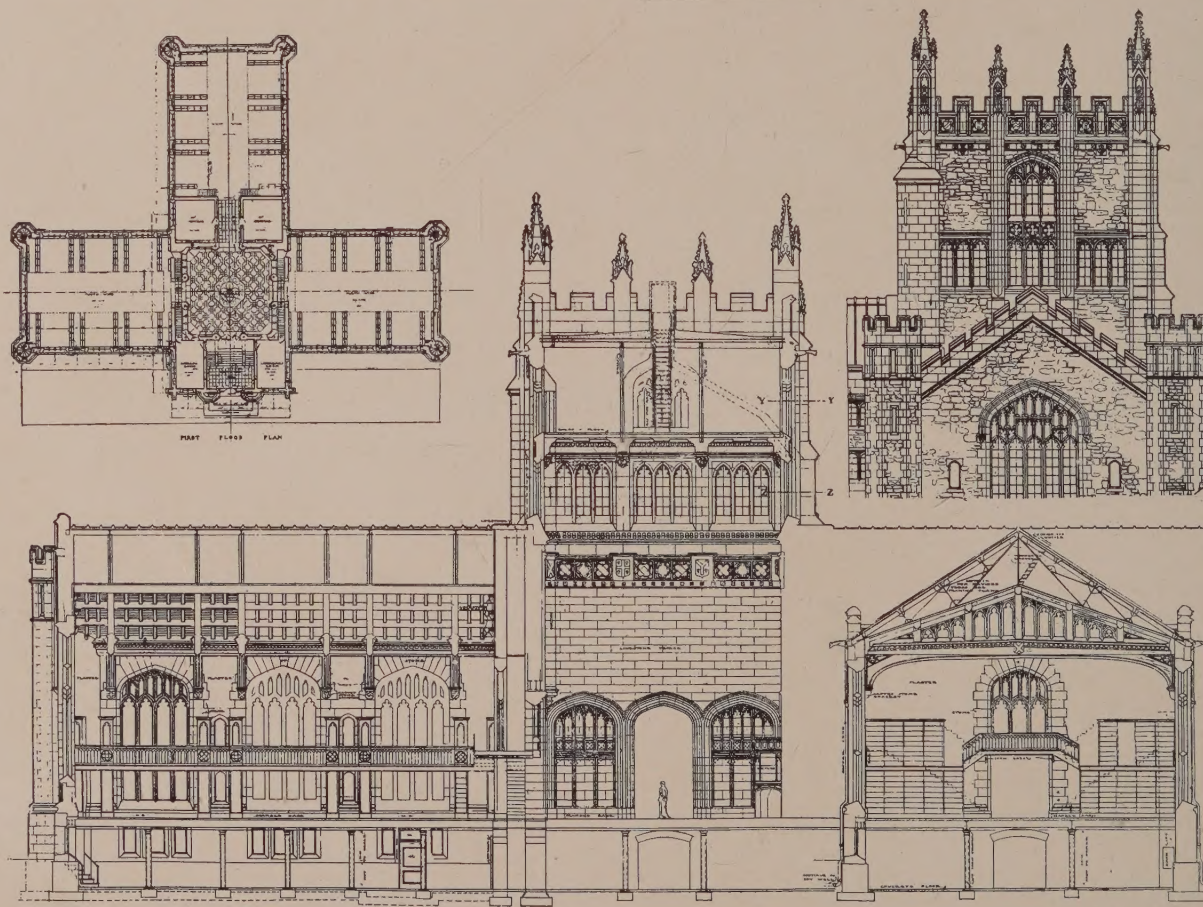
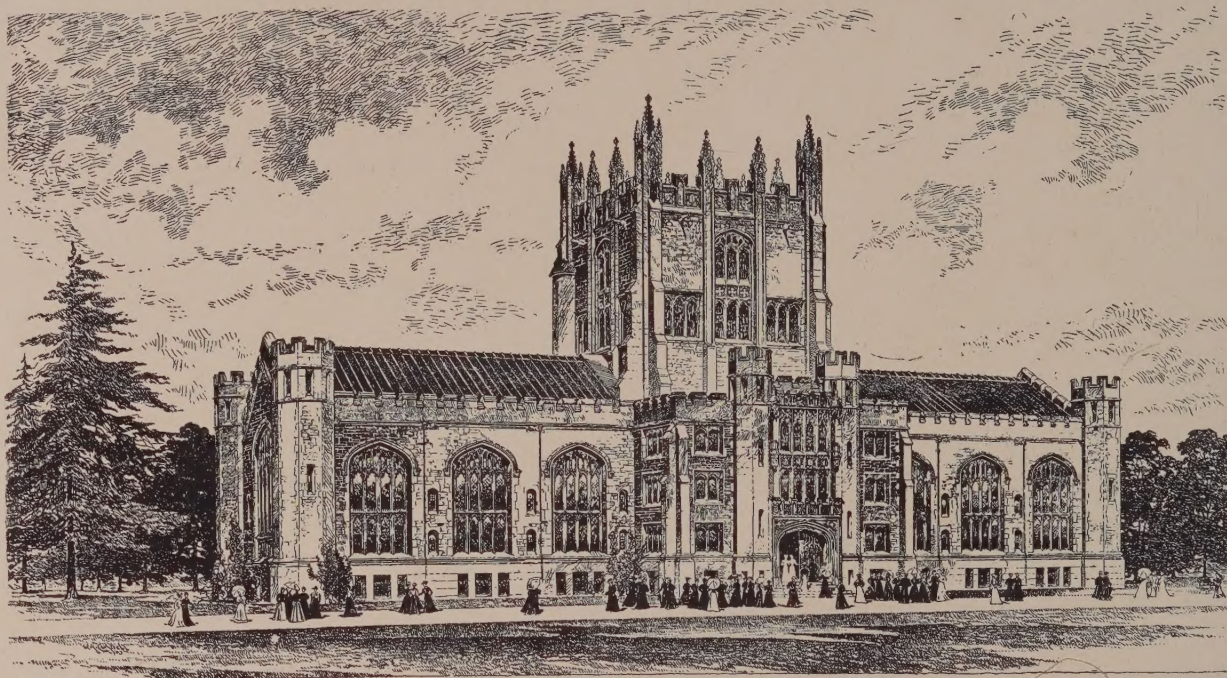
THE WARREN PRIZE COMPETITION.

AN ESTABLISHMENT FOR THE MANUFACTURE OF EXPLOSIVES.

In the proposed group of buildings will be manufactured projectiles and other instruments of war, and fireworks, providing ample space and accommodations for their manufacture as well as for experiments and public displays, such as rifle ranges, etc., and a basin for aquatic experiments, and an open-air theatre for pyrotechnic displays.

The property secured is a level tract 300' x 600'. One of the smaller dimensions is on a highway and the other on a large testing ground. The other dimensions are bordered by thick woodlands.

(Continued page 95)



• LONGITUDINAL SECTION •

• SECTION THRO WING •

THOMPSON MEMORIAL LIBRARY, VASSAR COLLEGE, POUGHKEEPSIE, N. Y.

Allen & Collins, Architects.

(Continued from page 93)

The testing grounds could contain the rifle ranges, etc., above mentioned, but would not be in the limits of the property.

The main requirements of the programme are as follows:

1st. Two groups each of 12 small isolated buildings for the manufacture of the explosives, one group for each class.

2nd. A central building containing physical and chemical laboratories, general storage for the materials, and lecture hall seating 300.

3rd. Small administration building.

4th. Open air amphitheatre seating 1500, with proper arrangements to allow of fireworks displays such as are held at Manhattan Beach.

5th. Separating the manufacturing group from the theatre, a basin for aquatic experiments and furnishing water for fire purposes.

6th. A rifle range and drill ground. This is supposed to form one of the confines of the problem and is not included in the preceding dimensions, as already explained.

The drawings required are:

1st. A general plan at $\frac{1}{16}'' = 1' 0''$,

2nd. A general elevation at $\frac{1}{16}'' = 1' 0''$.

The drawings should be signed with name and address.

RICHARD WALKER.

THE PRACTICAL IN BUILDING.

W. L. MEAD.

AN inclination to shirk the practical in building as well as other pursuits is one of the tendencies of the age, and this has been mainly owing to the academical training of professional men, and to other causes such as competition, hurry in business, and the desire to make a reputation—all of which have been quite opposed to a thoughtful study of the real requirements and functions of building. Building schemes are now taken up from purely commercial and business motives; it is a question of being first in the field of competing with large firms, or of obtaining public support, or of showing a good investment. There is the hurry and rush of

preparing designs, in which the architect only takes cognizance of the general requirements, and has no time to enter into practical considerations, such as accommodation, construction, cost, and the like, or to weigh such matters as the best and most workable plan, the best arrangements for plant, for heating or ventilation, or the most practical system of fire-resisting construction, etc. The architect has no time to study these details. The plans and scheme must be prepared quickly and advertised. Even the contract must be hurried. The architect likes to see even his name associated with the scheme. The company or promoters are eager to obtain all the support they can. Such haste is inimical to careful thought and practical considerations. To consider first the planning of buildings: How few architects in the present day look at the subject as a really scientific study, in which definite facts and data are closely related, or as a part of the design requiring personal knowledge of the habits and wants of the kind of tenants, or of the class of occupants who use the building, in which every person has an interest, of those who do business in the building, or who live in it? The ordinary professional man takes a few plans of the sort of building he wants, and proceeds to sketch out an arrangement till he thinks it will answer. Or the problem is solved in his mind, if he hits upon a plan which will give the rooms and the dimensions required by the instructions. But how these rooms are to be located or grouped, with the object of saving the time of those who use them; whether an official will find it more convenient to have his office within easy communication with his clerks, or if there should be a door between one room and another; which offices are most frequented by the public in a municipal building; or how a number of students will stand or sit round a laboratory bench; how a few feet of corridor can be saved, to diminish the servants' labor, are little matters which never enter the head of the designer of a certain class. And yet these are just the points and questions upon which the working aptitude of the plan depends. They make all the difference between a practical and an unpractical plan. Competition plans are often destitute of this special study, and we go through many designs for municipal offices, libraries, technical institutes,

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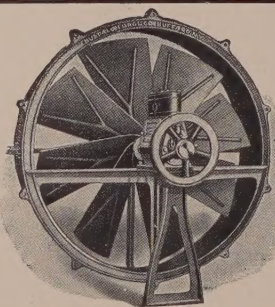
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which show an utter indifference to the simplest duties of town clerks, rate collectors, sanitary inspectors, or medical officers and students, or those who superintend libraries, or go to borrow books. Again, in public halls and places of assembly the movement of crowds entering or leaving ought to be made a study, so that all confusion and jostling may be minimized as much as possible. In dwelling houses the problem should be to place every room in its right place for use and aspect, to reduce all passages, to avoid steps, and to facilitate by every possible and direct means the conveyance of goods and provisions, and so to economize service and the labor of servants. The kitchen should be convenient to the dining-room, the sanitary arrangements be confined to one part of the house, and the service and waste pipes placed so as to be accessible for repair. These are points constantly neglected in the desire to conform to some type of plan. Even in such details as the size and position of tables and sideboards and other furniture, we find little attention paid to the seating of guests and the room necessary in serving them. These points of plan become more urgent in the design of laborers' dwellings and cottages, where every inch of space is of value. The positions of larders, closets, seats, and bedsteads ought in every case determine the size and shape of the rooms. The economics of plan open a large question in the design of every class of building.

Practical considerations enter no less into questions of materials and construction. The wrong material may involve, and often does entail, unnecessary expense in repair and painting, etc. We often see provided the wrong sort of wood for inside joinery, and paneling which shrinks and is full of "dead knots," and which requires continual painting; or we see the wrong sort of wood put into panels for staining and varnishing, which ought to have a good "figure." Thus, in selecting hardwood for joinery, the panels should be selected from the ornamental portion of the plank, whereas the framing may be straight-grained. The plank should be cut specially for this purpose. For varnished work, the pieces for framing and paneling ought to be selected for these particular positions, instead of which we find little attention given to the subject by the architect; different shades of wood, heartwood and sapwood, are placed together in the same panel, which renders the joint between the pieces visible, or half the panel is "figured," the other half plain. As a matter of fact, it makes all the difference the way the wood is cut; if cut radially the figure is exposed, whereas tangentially the grain is straight.

Bricks should be examined before they are put in the building, and any of inferior quality be ordered to be removed, as they can be tested only by examination before being built into a wall. The

practical man will make it a special study to know the various kinds and qualities of bricks on the market. He will also see that they are soaked in dry weather before being used, and are properly bonded at angles, reveals, in piers, bay windows, flues, etc., matters which are very seldom examined by the architect, who looks only at the finished work and the external appearance. Small details will receive his attention, such as the bonding of a pier, the working of a gauged arch, the number of joints to a foot in height, the make and squareness and arris of the bricks. He will see that the openings of doors and windows are of such a size that the bricks will not have to be cut. The practical mind in building generally exhibits itself in dimensions which can be worked to with the least cutting or labor, in arrangements of material that can be made with the marketable sizes of such things as timber and brick; whereas, the impractical architect puts the workman to unnecessary labor in specifying sizes which cannot be worked to without waste of material. Working drawings are often made which show thoughtlessness or disregard of these things. We see stone or terra cotta blocks to dimensions which cannot be economically made to agree with the courses of brick, timbers cut to scantlings that entail great waste, whereas, a knowledge of the conversion of timber by sawing would dictate a size for, say, joists that could be made out of a plank or a batten. To use the multiple of a brick for openings or some even dimension, instead of cutting, is appreciated by the practical bricklayer and joiner, and all engaged in building, as it avoids unnecessary labor. Hence, the value of standard sizes for bricks, timber scantlings, iron and steel sections, and other materials. Draughtsmen and young architects appear to ignore these considerations of even dimensions, and add to the labor and cost without the slightest compensating advantage. A fraction of an inch in the depth or thickness of a joist, or the size of a modillion in a cornice, if insisted on, would put the builder to much extra cost in material and labor; but he does not, as a rule, trouble about these irregularities, but uses his own discretion, and the architect is often none the worse off for the slight alteration. So in making detail drawings of woodwork; dimensions and thicknesses are often shown which cannot be gotten out of the ordinary deals and battens. To a practical man such detail drawings are regarded with a kind of sneer; if carried out as the architect intends the cost is seriously increased. They have, therefore, to be altered, and the builder takes upon himself a task. But the architect's design may be shorn of its solidity and beauty by such alteration, and in this way many designs are robbed of the effect the designer intended.



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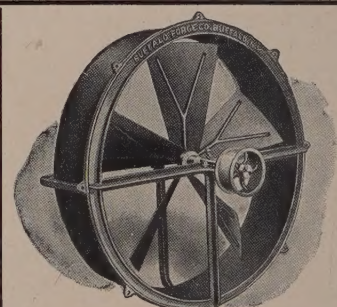
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